

REMARKS

Claims 1-9 and 11-13 remain in the application. Only Claim 1 is in independent form. Claim 10 has been cancelled. The amended claims are attached hereto and are entitled **“VERSION WITH MARKINGS TO SHOW CHANGES MADE”**.

Applicants hereby affirm the Provisional Election made with traverse by Mr. David R. Kurlandsky on May 8, 2002, wherein the invention of Group I, Claims 1-13, in part, was selected. For the purposes of this restriction, the species of example 6, page 25, was elected.

The subject claims have been amended to read only on the Group I subject matter.

After consideration of the Examiner's arguments supporting the requirement for restriction, traversal thereof is withdrawn. Applicants hereby retain the rights to file subsequent divisional applications for the non-elected subject matter, without prejudice.

The specification was objected to as not containing an abstract of the disclosure as required by 37 C.F.R. §1.72(b). Applicants submit herewith, on a separate sheet, an abstract in compliance with 37 C.F.R. §1.72(b), thereby overcoming this objection to the specification.

Claims 3-5 and 9-13 were objected to under 37 C.F.R. §1.75(c) as being in improper form as multiple dependent Claim 3 included further claims depending thereon. Applicants have amended the dependencies to overcome this objection.

Claim 4 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, it was stated that there was insufficient antecedent basis for the “R1” limitation in Claim 4. Applicants have amended Claim 4 to replace “R1” with “R5” thereby overcoming the rejection to Claim 4.

Claims 1-3, 5, 6 stand rejected under 35 U.S.C. §102(b) as being anticipated by the Gilligan et al. reference. The Examiner is respectfully requested to reconsider the rejection under 35 U.S.C. §102(b), as anticipated by Gilligan et al., as applied to the presently amended claims. Anticipation has always been held to require absolute identity in structure between the claim structure and a structure disclosed in a single reference.

In the presently amended claims, a method is defined for treating pain by administering a compound of amended formula I. The Gilligan et al. reference does not teach the use of compounds of formula I for the treatment of pain. Since the Gilligan et al.

reference does not show this feature, the claims are clearly patentable over the Gilligan et al. reference, and reconsideration of the amended claims, is respectfully requested.

Claims 1-3 and 5-8 stand rejected under 35 U.S.C. §102(b) as being anticipated by the Quaglia et al. reference. Reconsideration of the rejection under 35 U.S.C. §102(b), as anticipated by the Quaglia et al. reference as applied to the presently amended claims, is respectfully requested.

As stated above, the presently amended claims define a method for treating pain by administering the compounds of formula I. Since the Quaglia et al. reference is silent as to any pain indication for the compounds disclosed therein, the claims are clearly patentable over the Quaglia et al. reference, and reconsideration of the amended claims, is respectfully requested.

Claims 1-5 stand rejected under 35 U.S.C. §102(b) as being anticipated by Claremon et al. reference. Reconsideration of the rejection under 35 U.S.C. §102(b) as anticipated by Claremon et al., as applied to the presently amended claims, is respectfully requested.

In the presently amended claims, a method for treating pain is defined wherein the spiro ring is directly adjacent to the $C(R^1)(R^2)$ group as can be seen in formula I of Claim 1. In the Claremon et al. reference, the spiro ring is not directly adjacent to the $C(R^1)(R^2)$ group as is defined in amended Claim 1. Since the Claremon et al. reference does not show this feature, the claims are clearly patentable over the Claremon et al. reference, and reconsideration of the amended claims is respectfully requested.

It is respectfully submitted that the presently amended claims are no longer anticipated by the prior art references set forth above, and reconsideration is respectfully requested.

Claims 1-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gilligan et al. in combination with Billington et al. and Gyermek (J. Clin. Anesthesia Vol. 8 (5) August 1996). According to the Examiner, it would have been obvious to one of ordinary skill in the art "to make the spiral tetralin compounds of Gilligan rather than its Billington analogs." Further, according to the Examiner, it would have been "Prima Facie Obvious to modify the compounds of Billington by making the tetralin spiro isomeric structure similar to the ones found in Gilligan and use them for treating various types of pain disorders." This rejection is respectfully traversed.

To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation in the reference (or combined references) or in the knowledge generally available to one of ordinary skill in the art to modify the reference teaching. Second, there must be a reasonable expectation of success. Finally, the reference must teach or suggest all the claim limitations.

The Gilligan et al. reference discloses tetralins falling within the scope of amended formula I that modulate dopaminergic function which are reported to be 5HT₂ receptor antagonists and sigma-1 receptor antagonist having anti-psychotic activity. However, no mention is made in the Gilligan et al. reference, of the use of the compounds of amended formula I, as set forth in amended Claim 1 of the presently pending application, for use in the treatment of pain.

The Billington et al. reference discloses a class of spirocyclic piperidine derivatives, which are selective ligands at sigma recognition sights which are useful as neuroleptic (anti-psychotic) agents. The compounds disclosed in the Billington et al. reference differ from those defined in amended Claim 1. Specifically, the compounds defined in amended Claim 1 are spiro(cycloalkaphenyl[2.4]piperidine) whereas the compounds disclosed in the Billington et al. reference are spiro(cycloalkaphenyl[1.4]piperidine). That is the compounds disclosed in the Billington et al. reference do not fall within the scope of formula I of the amended claims and, furthermore, are taught as anti-psychotic agents and are silent as to their use for the treatment of pain.

The Gyermek reference is cited by the Examiner for the disclosure that “serotonin (5-hydroxytryptamine) is envisioned in the treatment of certain types of pain syndromes.” (see page 11 of Office Action) Referring specifically to paragraph 2 of the Gyermek reference, the specific statement regarding the treatment of “certain types of pain syndromes” states: “Serotonin reuptake inhibitors are of particular critical importance in the treatment of psychological illnesses. Future use of these drugs is also envisioned in the treatment of certain types of pain syndromes.” The Gyermek reference teaches that there are a variety of serotonin receptor subtypes having a diversity of pharmacologic actions. Further, the Gyermek reference teaches that selective agonists and antagonists have been developed for treatment of various disorders which are responsive to specific serotonin subtypes. The Gyermek reference

is completely devoid of discussion of any specific compounds falling within the scope of formula I of amended Claim 1 of the present application.

The compounds of formula I of amended Claim 1 are useful for the treatment of pain. The Gilligan et al. reference does not teach the use of the compounds of formula I for the treatment of pain. The compounds set forth in amended Claim 1 are not disclosed or suggested by the Billington et al. or the Gyermek references.

Thus, merely in terms of the structures of the compounds set forth in amended Claim 1, the first and third requirements of the *prima facie* case have not been met. First, there is no suggestion or motivation in the Gilligan et al. reference, in combination with the Billington et al. reference in the Gyermek reference to treat pain with the compounds of formula I as defined in amended Claim 1. Additionally, the references fail to teach or suggest the use of the compounds of formula I for the treatment of pain. Moreover, as set forth below, the compounds of formula I were chosen for their ability to inhibit pain, not because of their abilities as agonists and/or antagonists of serotonin. Thus, it is not obvious (based solely on serotonin agonists/antagonist activity) that particular members within the class would be useful as a treatment for pain.

Neither the Gilligan et al. reference nor the Billington et al. reference teach or suggest the use of the compounds disclosed therein for the treatment of pain. Rather, both the Gilligan et al. reference and the Billington et al. reference disclose the use of the compounds therein as anti-psychotic and/or neuroleptic agents. The above-quoted passage from the Gyermek reference only teaches that serotonin reuptake inhibitors are of particular clinical importance in the treatment of psychological illnesses and speculates that these drugs may or could be used in the treatment of certain types of pain syndromes. In no way does Gyermek provide an explicit or definitive link between serotonin antagonists and a treatment of pain. The statement is general and vague and, in view of the known differences in utilities for the ligands of 5-HT receptor sub-types, this statement would not provide one of ordinary skill in the art any teaching that pain would be a utility the compounds of Claim 1.

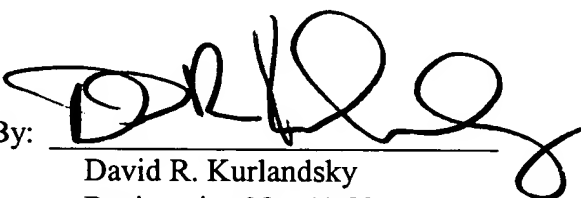
Thus, the Examiner has not made a *prima facie* case of obviousness with regard to the use of the compounds of formula I of Claim 1 for the treatment of pain since there is no suggestion or motivation in the Gilligan et al. reference, the Billington et al. reference, or the Gyermek reference alone or in combination to modify the teachings of these references to

arrive at the claimed invention and, secondly, given the speculative nature of the link between serotonin reuptake inhibitors and the treatment of pain, there is no reasonable expectation that known serotonin antagonists would be successful in treating pain. A reasonable expectation of success is one of the basic considerations in determining obviousness or not. See M.P.E.P., 8th Edition, Chapter 2141, pages 2100-2114, under the title "Basic Considerations Which Apply to Obviousness Rejections", specifically, point (D) which states: "Reasonable expectation of success is the standard with which obviousness is determined." All the Examiner has done is made a case for "obvious to try", which is not the standard for obviousness as the Court of Appeals for the Federal Circuit has made clear. Thus the use of the compounds of formula 1 to treat pain is not obvious over Gilligan et al. in combination with Billington et al. and Gyermek, and this rejection should be withdrawn.

In view of the present amendment and foregoing remarks, reconsideration of the rejection and advancement of the case to issue are respectfully requested.

The Commissioner is authorized to charge any fee or credit any over payment in connection with this communication to our Deposit Account No. 23-0455.

Respectfully submitted,

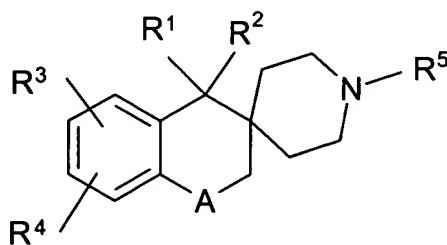
By: 

David R. Kurlandsky
Registration No. 41,505
Warner-Lambert Company
2800 Plymouth Road
Ann Arbor, MI 48105
Tel.: (734) 622-7304
Fax: (734) 622-1553

Attachment - Amended claims - Version with markings to show changes made
Abstract on separate page

“VERSION WITH MARKINGS TO SHOW CHANGES MADE”

1. (Amended) A method for treating a mammal suffering from pain and in need of treatment comprising administering an effective amount of a tricyclic compound of Formula I:



(I)

wherein:

R^1 is hydrogen or hydroxy;

R^2 is hydrogen or hydroxy; or

R^1 and R^2 together are oxygen ;

A is [a bond,] CH_2 , $[CH\ CH_3, CH_2\ CH_2]$ ~~$-CHCH_3-$~~ or $C(CH_3)_2$;

R^3 and R^4 are the same or different and are hydrogen, halo, C_1 - C_6 alkyl, C_1 - C_4 alkoxy, trifluoromethyl, NO_2 , COR^6 , $COOR^6$ or NR^6R^7 , wherein R^6 and R^7 are the same or different and are hydrogen, C_1 - C_6 alkyl or benzyl ;

R^5 is hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{3-6} cycloalkyl, $(O=C)$ - C_{1-6} alkyl, $(O=C)$ - C_{2-6} alkenyl, $(O=C)$ - C_{3-6} cycloalkyl, wherein said alkyl, alkenyl and cycloalkyl groups can be substituted by 1, 2 or 3 groups selected from halo, C_3 - C_6 cycloalkyl, phenyl or substituted phenyl, and a pharmaceutically acceptable salt thereof.

2. (Amended) A [compound] method according to Claim 1, wherein R^5 is C_1 - C_6 alkyl, optionally substituted with phenyl or a C_3 - C_6 cycloalkyl group.

3. (Amended) A [compound] method according to Claim 1 [or 2,]

wherein R³ is hydrogen, halogen or C₁₋₄ alkoxy.

4. (Amended) A [compound] method according to [any one of Claims]

Claim 1 [to 3], wherein [R¹] R⁵ is C₁₋₆ alkyl, C₂₋₆ alkenyl or C₃₋₆ cycloalkyl,

optionally substituted by 1, 2 or 3 groups selected from halo, C₃₋₆ cycloalkyl,

phenyl or substituted phenyl, and R² is hydrogen.

5. (Amended) A [compound] method according to [any one of Claims]

Claim 1 [to 4], wherein R⁴ is hydrogen.

6. (Amended) A method according to Claim 1, wherein the compound is
selected from the group consisting of:

3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cyclopropylmethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cyclobutylmethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cyclohexylmethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-phenylethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cyclopropylethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cinnamyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(3,3-diphenylpropyl)-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-5,7-dimethyl-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-6-methoxy-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-5-methoxy-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-7-methoxy-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-7-nitro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-7-Amino-3,4-dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-7-Chloro-3,4-dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

3,4-dihydro -1'-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'- allyl - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

3,4-dihydro -1'-(2-methylpropyl)-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropionyl- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) - 1' (trans-2-phenyl-methylcyclopropyl) ;

3,4-dihydro -1'-benzyl-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

3,4-dihydro -1'-(di-p-fluorobenzhydryl)-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl- 1,3,4-trihydro -1-hydroxy-spiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl- 1,2,3,4-tetrahydro -spiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl-1,3-dihydro-1-oxospiro-[2H-indene-2,4'-piperidine]

1'-(cyclopropylmethyl)-8,9-dihydrospiro[6H-benzocycloheptene-6,4'-piperidin]-5(7H)-one ;

1'-cyclopropylmethyl- 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

6-chloro-1'-cyclopropylmethyl- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl- 3,4-dihydro -6-fluoro-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl- 3,4-dihydro -6,7-dimethoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(1-cyclopropyl-1-ethyl)- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3-pentene)- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3-phenylpropyl)- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cinnamyl- 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylethyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclobutylmethyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclohexylmethyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cinnamyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(2-phenylethyl) - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3-phenylpropyl) - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3,3'diphenylpropyl) - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylethyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclobutylmethyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclohexylmethyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cinnamyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(2-phenylethyl) - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3-phenylpropyl) - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3,3'diphenylpropyl) - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclopropylethyl - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclobutylmethyl - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclohexylmethyl - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cinnamyl - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(2-phenylethyl) - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3-phenylpropyl) - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3,3'diphenylpropyl) - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclopropylethyl - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclobutylmethyl - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclohexylmethyl - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cinnamyl - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(2-phenylethyl) - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3-phenylpropyl) - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3,3'diphenylpropyl) - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro-1'-cyclopropylethyl - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro -1'-cyclobutylmethyl - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro -1'-cyclohexylmethyl - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro -1'-cinnamyl - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro -1'-(2-phenylethyl) - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro -1'-(3-phenylpropyl) - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ; [and]

6-chloro -1'-(3,3'diphenylpropyl) - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine[.] ; and

3,4-Dihydro-6-methoxy-1-oxospiro[naphthalene-2(1H),4'-piperidine]

7. (Amended) A [compound] method according to Claim 1, wherein the compound is selected from the group consisting of:

1'-cyclopropylmethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cyclopropylethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cinnamyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(3,3-diphenylpropyl)-3,4-Dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-5,7-dimethyl-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-6-methoxy-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-5-methoxy-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-7-methoxy-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-3,4-Dihydro-7-nitro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-7-Amino-3,4-dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-(cyclopropylmethyl)-7-Chloro-3,4-dihydro-1-oxospiro[naphthalene-2(1H),4'-piperidine];

1'-cyclopropylmethyl- 1,3,4-trihydro -1-hydroxy-spiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl- 1,2,3,4-tetrahydro -spiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl-1,3-dihydro-1-oxospiro-[2H-indene-2,4'-piperidine]

1'-(cyclopropylmethyl)-8,9-dihydrospiro[6H-benzocycloheptene-6,4'-piperidin]-5(7H)-one ;

1'-cyclopropylmethyl- 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

6-chloro-1'-cyclopropylmethyl- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl- 3,4-dihydro -6-fluoro-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylmethyl- 3,4-dihydro -6,7-dimethoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(1-cyclopropyl-1-ethyl)- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3-pentene)- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3-phenylpropyl)- 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cinnamyl- 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylethyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclobutylmethyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cinnamyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3-phenylpropyl) - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-(3,3'diphenylpropyl) - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclopropylethyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine) ;

1'-cyclobutylmethyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cinnamyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3-phenylpropyl) - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3,3'diphenylpropyl) - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclopropylethyl - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cinnamyl - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3-phenylpropyl) - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3,3'diphenylpropyl) -3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclopropylethyl -3,4-dihydro-4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cyclobutylmethyl -3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-cinnamyl - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3-phenylpropyl) - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

1'-(3,3'diphenylpropyl) - 3,4-dihydro -4-methyl-1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro-1'-cyclopropylethyl - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro -1'-cinnamyl - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ;

6-chloro -1'-(3-phenylpropyl) - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine ; [and]

6-chloro -1'-(3,3'diphenylpropyl) - 3,4-dihydro -1-oxospiro(naphthalene-2(1H),4'-piperidine[.] ; and

3,4-Dihydro-6-methoxy-1-oxospiro[naphthalene-2(1*H*),4'-piperidine]

8. (Amended) A method according to Claim 1, wherein the compound selected from the group consisting of :

1'-cyclopropylmethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1*H*),4'-piperidine];
1'-cyclopropylethyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1*H*),4'-piperidine];
1'-cinnamyl-3,4-Dihydro-1-oxospiro[naphthalene-2(1*H*),4'-piperidine];
1'-(3,3-diphenylpropyl)-3,4-Dihydro-1-oxospiro[naphthalene-2(1*H*),4'-piperidine];
1'-(cyclopropylmethyl)-3,4-Dihydro-6-methoxy-1-oxospiro[naphthalene-2(1*H*),4'-piperidine];
1'-(3-phenylpropyl)- 3,4-dihydro -1-oxospiro(naphthalene-2(1*H*),4'-piperidine ;
1'-cyclobutylmethyl - 3,4-dihydro -5-methoxy-1-oxospiro(naphthalene-2(1*H*),4'-piperidine ;
1'-cyclopropylethyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1*H*),4'-piperidine ;
1'-cyclobutylmethyl - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1*H*),4'-piperidine ;
1'-(3-phenylpropyl) - 3,4-dihydro -6-methoxy-1-oxospiro(naphthalene-2(1*H*),4'-piperidine ;
1'-cyclopropylethyl - 3,4-dihydro -7-methoxy-1-oxospiro(naphthalene-2(1*H*),4'-piperidine ; and
3,4-Dihydro-6-methoxy-1-oxospiro[naphthalene-2(1*H*),4'-piperidine]

9. (Amended) A pharmaceutical composition comprising a compound according to [any one of Claims] Claim 1 [to 8] admixed with a pharmaceutically acceptable carrier, diluent, or carrier therefor.

Cancel Claim 10.

11. (Amended) A method according to Claim [10] 1 wherein the pain is neuropathic pain.

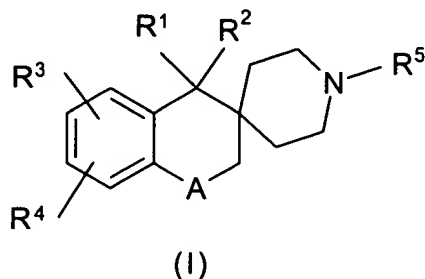
12. (Amended) A method according to Claim [10] 1 wherein the pain is diabetic neuropathy.

13. (Amended) A method for treating a mammal suffering from a seizure disorder comprising administering an effective amount of a compound of [any one of Claims] Claim 1 [to 8].

a!

ABSTRACT

A tricyclic compound of Formula I:



wherein:

R^1 is hydrogen or hydroxy;

R^2 is hydrogen or hydroxy; or

R^1 and R^2 together are oxygen ;

A is a bond, CH_2 , $CHCH_3$, CH_2CH_2 or $C(CH_3)_2$;

R^3 and R^4 are the same or different and are hydrogen, halo, C_1 - C_6 alkyl, C_1 - C_4 alkoxy, trifluoromethyl, NO_2 , COR^6 , $COOR^6$ or NR^6R^7 , wherein R^6 and R^7 are the same or different and are hydrogen, C_1 - C_6 alkyl or benzyl ;

R^5 is hydrogen, C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_3 - C_6 cycloalkyl, $(O=C)$ - C_1 - C_6 alkyl, $(O=C)$ - C_2 - C_6 alkenyl, $(O=C)$ - C_3 - C_6 cycloalkyl, wherein said alkyl, alkenyl and cycloalkyl groups can be substituted by 1, 2 or 3 groups selected from halo, C_3 - C_6 cycloalkyl, phenyl or substituted phenyl, and salts thereof, are particularly useful for treating, among other indications, neuropathic pain and other CNS disorders.